

# INTERNATIONAL SEARCH REPORT

International Application No  
PC 2004/000705

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F03B13/18 F03B11/06 F16C27/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F03B F16C F03D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 89/07197 A (BURTON, LAWRENCE, C) 10 August 1989 (1989-08-10)	1,2, 16-19, 23-30 3-10,21
Y	page 4 - page 9 abstract; figures	
Y	US 4 223 962 A (ZIELFLEISCH ET AL) 23 September 1980 (1980-09-23)	3-5,7
A	column 1, line 6 - line 64 column 2, line 62 - column 4, line 7 abstract; claims 1-6,11; figures	6
Y	GB 2 062 130 A (SALTER S H) 20 May 1981 (1981-05-20)	6
A	page 1, line 67 - line 115 abstract; figures	3-5,7
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

9 February 2005

Date of mailing of the international search report

22/02/2005

Name and mailing address of the ISA

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Inte al Application No  
PC 1/UK2004/000705

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 5 986 349 A (EBERLE ET AL) 16 November 1999 (1999-11-16) column 3, line 12 - line 45 column 4, line 53 - column 7, line 62 abstract; figures -----	8-10 11-15
Y A	US 6 476 511 B1 (YEMM RICHARD ET AL) 5 November 2002 (2002-11-05) cited in the application column 1, line 36 - line 53 column 5, line 11 - line 45 column 8, line 10 - line 46 column 10, line 6 - column 11, line 19 figures 3,6,7,10,11 -----	21 8-15
A	FR 2 532 691 A (GARZON ASTETE JORGE) 9 March 1984 (1984-03-09) page 3, line 14 - page 5, line 7 abstract; figures -----	23-30

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,2,16-22

A wave power apparatus comprising a plurality of arms with floats attached at one end so that movement of the float caused by a wave results in rotation of the arm around a shaft. A hydraulic lift system is provided for lifting the floats out of the ocean. The float is pivotally joined to the arm.

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2. claims: 1,3-7

A wave power apparatus comprising a plurality of arms with floats attached at one end so that movement of the float caused by a wave results in rotation of the arm around a shaft. A hydraulic lift system is provided for lifting the floats out of the ocean. The arm is connected to the shaft at at least two points which are offset from the axis of the arm and the shaft is rotatably supported by a fixed support comprising two bearings arranged to counteract radial and axial forces.

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3. claims: 1,8-15

A wave power apparatus comprising a plurality of arms with floats attached at one end so that movement of the float caused by a wave results in rotation of the arm around a shaft. A hydraulic lift system is provided for lifting the floats out of the ocean. The plurality of arms are arranged in a row such that a passing wave causes the arms to successively pivot about the shaft and the row of arms are oriented at an angle of within  $\pm 60$  degrees of the wave heading.

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4. claims: 1,23-30

A wave power apparatus comprising a plurality of arms with floats attached at one end so that movement of the float caused by a wave results in rotation of the arm around a shaft. A hydraulic lift system is provided for lifting the floats out of the ocean. A supporting structure which is anchored to the sea floor supports power conversion means and the shaft. Further features relating to the support structure are provided.

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ional application No.  
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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DK2004/000705

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 8907197	A	10-08-1989	AU 615274 B2 AU 3191689 A BR 8907920 A CA 1325951 C EP 0371093 A1 JP 2503218 T JP 2729096 B2 KR 9609216 B1 NZ 227740 A PH 25051 A WO 8907197 A1 US 4931662 A	26-09-1991 25-08-1989 12-08-1997 11-01-1994 06-06-1990 04-10-1990 18-03-1998 16-07-1996 26-02-1991 28-01-1991 10-08-1989 05-06-1990
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FR 2532691	A	09-03-1984	FR 2532691 A1	09-03-1984